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9
10 UNITED STATES DISTRICT COURT
11 NORTHERN DISTRICT OF CALIFORNIA
12 SAN JOSE DIVISION

13 FACEBOOK, INC.,

14 Plaintiff,

15 v.

16 POWER VENTURES, INC. a Cayman Island
17 Corporation; STEVE VACHANI, an
individual; DOE 1, d/b/a POWER.COM,
18 DOES 2-25, inclusive,

19 Defendants.

Case No. 5:08-cv-05780 JW

**DECLARATION OF LAWRENCE
MELLING IN SUPPORT OF
FACEBOOK, INC.'S MOTION TO
COMPEL PRODUCTION OF
SOURCE CODE**

Judge: Hon. James Ware
Courtroom: 8, 4th Floor

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21 REDACTED
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1 I, Lawrence Melling, declare the following expert disclosures.

2 **I. SUMMARY OF FINDINGS**

3 1. I am a research engineer at Zeidman Consulting. I make this declaration in
4 support of Plaintiff Facebook, Inc.'s Motion To Compel Power Ventures, Inc. to Produce
5 Documents based on my personal knowledge, unless otherwise noted. If called, I can and will
6 testify competently to the matters set forth herein.

7 2. I conducted a review of the two PowerScript documents provided POWER
8 2011.02.03 000004-22 (AEO) and POWER 2011.02.03 000023-67 (AEO). These documents
9 [REDACTED] and did not include any information regarding
10 how PowerScript was used to develop the interface of Power.com to Facebook.com. In addition,
11 the PowerScript documentation did not provide any information on how the Power.com web
12 pages are created, and this information is necessary to determining which data through
13 unauthorized access was acquired and/or downloaded by Power from Facebook. As I explain
14 further below, I found no information on how Power.com used PowerScript to interface, connect,
15 browse, or transfer data to provide the Facebook functionality visible in the screenshots taken off
16 the Power.com website, nor any information on how the Power.com website integrated the
17 PowerScript applications to create the web pages.

18 **II. BACKGROUND**

19 3. This introductory section of my Declaration gives information about my
20 qualifications as well as a discussion of technical terms needed to understand this report.

21 **A. Personal experience and background of Lawrence Melling**

22 4. I am a research engineer at Zeidman Consulting. I have over 30 years of executive
23 management and engineering experience in developing new hardware and software technologies
24 and bringing them to market. I have been engaged in applications engineering and marketing of
25 electronic design automation (EDA) tools at major companies and small startups. I have also been
26 involved in the development of sophisticated tools for source code and object code analysis for
27 finding intellectual property infringement. My resume is attached as Exhibit A of this declaration.
28

1 **B. Website**

2 5. Merriam-Webster's online dictionary defines a website as "a group of World Wide
3 Web pages usually containing hyperlinks to each other and made available online by an
4 individual, company, educational institution, government, or organization." These pages are
5 hosted for viewing by one or more web servers. The pages are viewed using an Internet Browser
6 or web client.

7 **C. Internet Browser**

8 6. An Internet browser or web browser is a typical client application used to navigate
9 the Internet. The browsers access information such as web pages, images, videos, and games from
10 Internet servers. The pieces of online information are addressed by a Uniform Resource Locator
11 (URL) that specifies where the information is and how to retrieve it. Servers may provide static
12 information to an Internet browser or may dynamically generate the information that is
13 transmitted to an Internet browser.

14 **D. Client**

15 7. A "client" is a computer that makes a service request to a server (defined below);
16 the server fulfills the request. Computer interactions using the client/server model are very
17 common. For example, when an individual checks a bank account from his or her computer, a
18 client program in the individual's computer forwards the request to a server program at the bank.
19 The bank's program may respond, or it may, in turn, forward the request to its own client
20 program that makes a request to another bank computer. With regard to the World Wide Web, the
21 browser on an individual's computer is a client program. With regard to a database the client
22 program is used to access and control the data from the individual user's computer. A client
23 application can also be referred to as the "front-end" and the server application is often called the
24 "back-end."

25 **E. Server**

26 8. A "server" is a computer on a network (such as an internal corporate network or
27 the Internet) that is dedicated to a particular purpose; it stores information and performs critical
28 functions. For example, a "database server" could store all of an organization's data on a single

1 machine, while providing database services to multiple users anywhere in the office or even the
2 world and also allowing access and control over the data. A typical “database server” will allow
3 users to utilize their data from custom applications designed to meet their specific needs. Server
4 software refers to software running on the server computer that “serves up” information to a client
5 computer. With regard to the World Wide Web, a web server responds to web client requests to
6 view web pages. These pages can be static (content doesn’t change) or dynamic (content is
7 determined when requested).

8 **F. Web Scripts**

9 9. “Web scripts” are written in a variety of languages to provide programming
10 functionality for generating dynamic web page content or to validate user input. Some of the
11 languages used for scripting include PHP, CGI, Perl, and JavaScript. Some scripts run on the web
12 server (server-side) while other scripts run on the user’s machine (client-side).

13 **G. Web Crawler or Spider**

14 10. A “web crawler” or “spider” is a computer program used to browse the Internet in
15 a systematic, comprehensive way. Web crawlers are typically associated with search engines and
16 are used to collect website information for search engine indexing, but spiders and web crawlers
17 are now being used to collect web page information for non-search related applications.

18 **H. Computer Database**

19 11. Computer databases consist not only of data, such as user names and addresses,
20 but also consist of schema and procedures represented by source code. The term “schema” refers
21 to the structure of the database including where to place the data, how to organize the data, and
22 the relationships between the data. For example, customer names may be placed in a field called
23 “Name” and that name is in a table called “Customers.” A table can be visualized as a spreadsheet
24 and the field would correspond to a particular column in the spreadsheet. In a database there are
25 many different tables. Each customer name may have an associated table that has fields that
26 contain the customer’s address, credit card number, account balance, and comments about the
27 customer. The table names, field names, types of data in the fields, and relationships between
28 different tables and different fields constitute the schema of the database and is described using a

1 special programming language such as the Structured Query Language, also known as SQL.

2 12. Procedures may also be stored in databases and are represented by a special
3 programming language such as SQL. These “stored procedures” can be used by programs that
4 access the database to manipulate the data in the database. For example, a stored procedure may
5 exist to compute the average outstanding balance for a list of customers. A program that is written
6 to access the database could also access the stored procedure in order to calculate this average.

7 **I. Source Code**

8 13. Computer programs can be written using complex instructions that look like
9 English. For example, the instruction $a = b * c + 2$ tells the computer to take the number stored in
10 memory and represented by variable b, multiply that by the number stored in memory and
11 represented by the variable c, add 2 and store the result in memory represented by the variable a.
12 Similarly, the statement `printf(“Hello world!”)` tells the computer to print the words “Hello
13 world!” to the computer screen. These high-level, English-like instructions are called “source
14 code.” Computer programs are made up of many lines of source code and the process of writing
15 these lines of code is called programming. Eventually these lines of source code are turned into
16 instructions that a computer understands, consisting of sequences of electronic ones and zeroes.
17 The process of turning human-readable source code into a file containing computer instructions is
18 called “compiling” and is performed by a special computer program called a “compiler.” In some
19 cases, source code is run directly by a computer, without creating any file of computer
20 instructions, in which case the program is “interpreted” by a special computer program called an
21 “interpreter” that converts each line of source code to computer instructions one at a time to be
22 executed by the computer.

23 **III. SCOPE OF EVALUATION FOR FACEBOOK’S MOTION TO COMPEL**

24 14. Based on my background and experience, I have been asked by the law firm of
25 Orrick, Herrington and Sutcliffe, on behalf of Facebook, to provide my opinions and conclusions
26 related to whether the documentation provided by Power Ventures, Inc. (“Power”) in response to
27 document requests for source code was sufficient to determine what data was transferred from
28 Facebook to Power.com, what Facebook functionality was available to Power.com users with

Facebook accounts, and how this functionality was implemented.

15. For the work of Lawrence Melling on this matter Zeidman Consulting is being compensated at a rate of \$200 per hour.

16. In reaching the opinions and conclusions discussed herein, I received, considered, and/or relied upon the following materials, copies of which are not attached but can be provided upon request:

- a. Screenshots of Power.com website: FBPOWER00041-00049.pdf, FBPOWER00057-00073.pdf, FBPOWER00075-00087.pdf, FBPOWER00088-00088.pdf, FBPOWER00089-00091.pdf, FBPOWER00095-00106.pdf, FBPOWER00109-00118.pdf, FBPOWER00133-00137.pdf, FBPOWER00140-00148.pdf, and FBPOWER00150-00153.pdf.
- b. [REDACTED] POWER 2011.02.03 000004-22 (AEO).pdf
- c. [REDACTED] POWER 2011.02.03 000023-67 (AEO).pdf
- d. Steve Vachani Deposition Transcript: 2011.07.20 [Power] Vachani, Steve (Full)

IV. ANALYSIS

17. Power produced a [REDACTED] and a [REDACTED] [REDACTED] that were reviewed. Both documents are [REDACTED] [REDACTED] [REDACTED] They lack any high-level architectural explanation of the PowerScript system and provide no information on the implementation of the Facebook connection or any description of creating and displaying Power.com web pages from the information gathered by a PowerScript application. The documents lack any information regarding how the system interfaces with email servers, databases, and the server file system [REDACTED] The documents also offer no information on the data or file system security for the Power.com website. These documents do little more than [REDACTED] and offer no information about how Power.com connected with Facebook, what data could be transferred, what Facebook functions

1 were supported, and how those functions were implemented.

2 18. The two documents simply [REDACTED]
3 [REDACTED] As such, the
4 documents function much like how a dictionary does. Yet, merely because an author knows what
5 words she can use to write a book does not mean she will know how to use them to write “War
6 and Peace.” It is also important to note that these documents offer no information on how to use
7 a PowerScript application to generate actual web pages for display, including but not limited to
8 documenting the [REDACTED] asserted in Mr. Vachani’s deposition. *See e.g.* pages 99:
9 14-25 and 100:1-2.

10 [REDACTED]
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15 [REDACTED]
16 19. Based on the documents it was impossible to determine how the Facebook
17 interface functionality that is shown in the numerous screenshots of the Power.com website was
18 developed, what information was used dynamically from Facebook, and what information was
19 transferred to Power.com from Facebook.

20 20. In order to determine the information described above, I require the website source
21 code including any scripts, both server-side (runs on Power.com server) and client side (runs on
22 the user’s computer), all PowerScript application source code written or used for gathering
23 Facebook content or executing Facebook functions, the database or databases used by the website
24 and/or by PowerScript, documentation on the email service or services used by PowerScript, files
25 written or read by the PowerScript programs, the source code used to compile, interpret, and
26 execute PowerScript scripts, and the source code for the spider or spiders used by PowerScript.
27 In addition, I require all available support materials for the Facebook development, Power.com
28 website, and PowerScript system such as readme files, tutorial examples, architectural diagrams

1 and definitions, system specifications and diagrams, build files, scripts, and server file system
2 specifications, diagrams, and security documents.

3 21. Because the functionality evolved over a period of several months, all versions of
4 the requested information should be included whether in version controlled form or copies or
5 backups on digital media, including code designed to access and run Facebook's "Event Invite"
6 service. The information gleaned from the different versions is critical to establishing Power's
7 exact conduct in initiating the transmission of these Invites, the process by which Power initiated
8 the transmission of these Invites, and the relevant timeframe when Power engaged in such
9 conduct. The code will also reveal if Power kept count of the number of Invites sent, which I
10 understand is important for statutory damages under the CAN-SPAM Act.

11 22. Defendants also argue that:

12 2) Facebook's claims pursuant to the CFAA and California Penal
13 Code 502 fail because Power "did not circumvent any technical
14 barriers," in accessing or providing its users with the tools to access
the Facebook website.

15 23. The source code will reveal the exact process by which Power accessed or allowed
16 others to access the Facebook website and services (such as sending email to users)—evidence
17 that cannot be deduced from Power's produced documents.

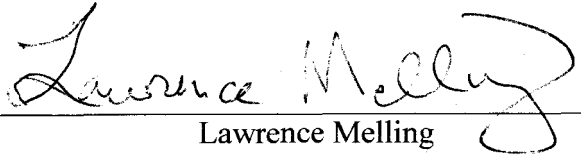
18 **V. CONCLUSION**

19 24. It is my understanding that discovery in this case is ongoing. Accordingly, I
20 reserve the right to supplement or amend my opinions in light of any additional evidence,
21 testimony, or information that may be provided to me after the date of this report. I also reserve
22 the right to supplement or amend my opinions in response to any expert reports served by any
23 other party in the lawsuit.

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1 Dated: 10-Aug-2011

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Lawrence Melling

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